

# PHILADELPHIA MEDICAL TIMES.

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VOL. XIX

## CLINICAL LECTURE.

### PENNSYLVANIA HOSPITAL.

By PROFESSOR J. M. DA COSTA.

One of the Attending Physicians to the Pennsylvania Hospital, etc.

Delivered January 5, 1889.

CASE I:—SPINAL HYPERÆMIA AND PARAPLEGIA, ASSOCIATED WITH POLYURIA.

**GENTLEMEN:**—This patient, 49 years of age, born in Ireland, occupies bed 14 in the Men's Medical Ward. He was admitted on the 22d of November, 1888, with loss of power in the

lower extremities, so that he was entirely unable to walk. While lying in bed, he had some power of movement in the muscles of the legs, but he was unable to flex the thighs upon his body. His mental faculties were not affected, and we obtained from him the following history: In early life he became infected with syphilitic disease, not followed by secondary symptoms. About five or six weeks before his admission here, he caught a severe cold, which was attended by cough and expectoration. As he was recovering from this, he noticed that he frequently stumbled

and his legs felt heavy; very soon afterwards he lost power in them so much that he was unable to walk or to stand upon them, and this was his condition when he entered the ward. We found upon examining him that his temperature was normal or a little below normal. Indeed, by looking at his clinical temperature record you will notice that during his stay in the hospital his temperature has not risen above the normal, and, on the contrary, is generally sub-normal. We found that sensation was not affected; that the loss of power was greater on the left side than on the right; that the knee-jerk and ankle-clonus were abolished in both legs; and that the functions of the bowels and bladder were not disturbed. The muscles responded to the Faradic current, though less actively than in health. There was no wasting of the extremities. He complained of passing attacks of weakness in the upper extremities, but this was not marked; indeed the upper extremities were only for a very short time and very incompletely affected. In the chest, with the exception of a few bronchial rales, nothing was noted. He was passing a large quantity of urine, from twelve to sixteen pints, in the twenty-four hours.

He soon improved after admission, and has gradually regained the use of his limbs. He now walks readily across the room and turns without any assistance; he can walk with his eyes shut and can stand with his feet in juxtaposition while gazing at the ceiling, without losing his balance. Upon testing the knee-jerk, there is faint response in both legs; but it is less strong this morning on the right side than on the left. His power of extending the leg in kicking is more evident on the left side than the right. I have told you that his intelligence was not affected; he tells us that taste, hearing, smell and sight are quite good. His eyes have been examined with the ophthalmoscope, and nothing abnormal has been detected. The special senses certainly have not been impaired.

Now what has been the matter with this patient that caused the loss of power in the lower extremities? The lesion was not in the brain; whatever it was, it was confined to the spinal

cord, and I may say almost entirely to the lower half of the cord, in the lumbar enlargement, from which the nerves of the lower extremities arise. I conclude that it was not a meningitis, because (1) the onset was not sufficiently acute, (2) there has been no elevation of temperature, (3) there have been no painful spasms in the limbs, which so generally occur in the course of inflammation of the membranes of the cord; though it is fair to say he has had occasional cramps. Nor has he had myelitis, because the paralysis has not been complete, and he has retained control over rectum and bladder. From the manner of onset, occurring at a time when the system was debilitated by a cold, and from the course of the disease, I am led to the conclusion that he suffered with a congestion of the spinal cord, and that it was almost entirely restricted to the lower part of the cord. In this congestion, the membranes probably shared to a considerable extent, and this will account for some dull pains and passing cramps in the legs of which he at times complained.

Had this condition any connection with the polyuria? I think not. Upon questioning him, we learned that the large flow of urine was first noticed three or four months before the loss of power occurred; so that it could not have been produced by the spinal affection.

Among the prominent causes which give rise to polyuria we notice strong emotion, mental shock, fright, etc.; blows or injuries to the head; sunstroke; some morbid growth, or disease of the vessels, of the floor of the fourth ventricle, and the occurrence of some exhausting or febrile disease. In the case before us the cause is unknown. He denies having had any great mental anxiety or profound emotion; he has not had any injury to his head; he has not had a sunstroke; he has not had any prolonged or exhausting disease. We might assume that there is some change in the floor of the fourth ventricle, and ascribe syphilis as the explanation; but there are no signs of a tumor at the base of the brain, and in the absence of such signs our views would be merely hypothetical.

With regard to his treatment, at first he was given the iodide of potassium (grs. x, three times a day), with daily friction and electricity to the muscles affected. Soon afterwards he was placed upon ergot (a half drachm of the fluid extract three times a day, subsequently increased to a drachm). Under this treatment, while his spinal symptoms yielded, the urine was reduced to twelve and then to ten pints; but that was all. We then gave him antipyrine (in five grain doses three times a day); but with the effect of slightly reducing the urine. He is now passing from eight to ten pints daily, and I propose giving ergot another trial, being careful to provide an active preparation of the drug. We will give him a drachm of the fluid extract four times a day. We can safely give these large doses since we have our patient constantly under observation, and can stop them at the first appearance of ill effects. If the ergot fails, I shall again resort to antipyrine, giving  $7\frac{1}{2}$  grains twice daily. No restrictions are placed upon his diet while under this treatment.

I have had better results in the treatment of polyuria with ergot than with any other drug. One of the latest of these successes occurred in my private practice in the case of a lady, who suffered with polyuria, the result of prolonged anxiety and exhaustion incident upon the serious sickness of one of her children. She was passing many times the normal quantity of urine, and when she came to me had used a number of remedies without any relief. I directed her to take ergotine pills, and also ordered some suppositories containing ergot. The result was so decided in reducing the quantity of urine that she of her own accord increased the dose, and used from twelve to sixteen grains of ergotine daily. As I only saw her when she came to my office—she lived out of town—I had little control over the case. She pushed the drug until she almost abolished the menstruation; she only had a very slight show, accompanied by a good deal of pain. She pushed it until she had numbness of the hands and feet, and had to have them rubbed at night; but she cured the polyuria. When she came to see me a few days ago she was in excellent

health, and the urine had not exceeded the normal quantity for more than a month. The ergot had been abandoned for nearly that period.

CASE II: ABORTIVE TREATMENT OF ACUTE  
PLEURISY WITH DIURETICS AND DRY  
DIET.

This man, 41 years of age, was admitted only two days ago (Jan. 3). He stated that he had had a chill on the day before, followed by fever and pain of a very severe character at the lower part of the right chest, making it impossible for him to take a long breath, and checking his cough. He had a temperature of  $102^{\circ}$  on admission, and was very restless on account of the pain in his side, which was excruciating and increased by the slightest movement of his body. We found slight impairment of resonance over the lower half of the right lung, anteriorly, with feeble breathing—probably because he voluntarily checked respiration on account of the pain—and we also detected pleural friction at the end of inspiration.

I bring this case before you solely to show you the results of treatment. It is now the third day of the disease, and his temperature is normal. He can breathe without pain and he slept all last night without an anodyne. Upon percussing his chest this morning, I still find relative dullness at the right base, and some friction-sounds are still audible; but I can hear the vesicular murmur beneath and there is no effusion.

When he was admitted his right chest was thoroughly cupped, and a few ounces of blood were taken with two wet cups. He was given two grains of Dover's powder every two hours, with at first a mercurial, and then forty grains of acetate of potassium every two hours, or at the rate of an ounce a day. The object of this treatment was to act freely upon the kidneys and prevent effusion, and this was favored by restricting the amount of liquids given him. The chest was enveloped in cotton.

The result has been all that could have been desired. The patient is convalescent. If needed, he can have five grains of Dover's powder at night,

although he slept very well last night without anything.

**CASE III: EXTREME WEAKNESS AND CARDIAC DEPRESSION IN TYPHOID FEVER TREATED WITH COCAINE.**

The patient now being carried in, a man about thirty years of age, was admitted early in December suffering with decided fever, which, during the first week of his stay here, ranged between  $105^{\circ}$  and  $106^{\circ}$  F. He had been taken sick a week or ten days before with fever, great prostration, and delirium. After his admission, we had no hesitation in pronouncing the case one of typhoid fever; although he never had any well-marked eruption upon the skin, we could only find one or two doubtful spots, and he never had any diarrhoea. His bowels were moved only once a day, or once in two days; but the stool was partly formed and partly like gruel, but it had the look of a typhoid fever stool. In spite of the frequent spongings of the patient and the administration of antipyrine (which we were afraid to push on account of his weak heart), the temperature continued high, though lowered by the sponging and antipyrine, and the patient's condition gradually grew worse. Without dwelling upon the daily details of the case, I will say that he was given whisky, twelve ounces in the twenty-four hours, and on the 12th of December, we put him upon a remedy which we had previously resorted to with good results in cases of failing circulation in typhoid fever, cocaine, of which he took  $\frac{1}{8}$  of a grain every six hours for nearly a week, until Dec. 18th. During this time his temperature steadily fell and did not rise again above  $102^{\circ}$ , and his delirium gradually subsided, and his pulse gained in volume, while the first sound of the heart became more distinct. His general condition since then has changed for the better, so that his temperature is now normal, we may regard him as convalescent from a more than usually severe case of typhoid fever. The convalescence was protracted by a bed-sore. He took the cocaine for about twelve days, and at the cessation of the fever it was exchanged for iron.

**ORIGINAL ARTICLES.**

**CHOREA**

BY JOHN FORD BARBOUR M. A., M. D.  
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SO various and so inconstant are the pathological findings in chorea, that it must be regarded as a symptom group, rather than a distinct morbid entity, the term having quite as broad a meaning as "neurasthenia," or "paralysis." There must, however, be some general condition common to all the morbid processes producing chorea; otherwise it is inconceivable that such different causes should induce such a definite and unmistakable symptom group.

I believe that I have arrived at a generalization sufficiently broad to cover all the facts in the case, and yet not so vague as to be unproductive of practical results. And as an hypothesis is valid in so far as it satisfactorily explains the phenomena in question, after stating my solution of the problem, I shall make a detailed application of it to the facts in the case, and shall then take up some other matters of interest connected with chorea.

It will be necessary to state clearly the physiology of the nerve cells, as briefly indicated by Carpenter in his work on Mental Physiology. The action of these cells has been compared to that of a Leyden jar, which, when surcharged with electricity, discharges itself. So in the nerve-cells, when the tension of the nerve force rises beyond a certain point, an automatic discharge occurs, causing muscular contraction, when motor cells discharge themselves; or sensations, in the case of sensory cells.

This discharge of nerve force is brought about by flushing of the nerve-cells with blood through the vaso-motor nerves. As a consequence of increased blood supply, there is increased nutritive activity in the cells, the rapid rise of tension of nerve force, and its automatic overflow.

There are many things which render this theory highly probable. During mental activity there is recession of blood from the limbs. The surface-thermometer shows a rise of temperature over the region of the cortical



motor areas during muscular exertion. Irritation of these areas by a fragment of bone, or otherwise, induces spasm of the muscles under the control of the irritated and doubtless hyperæmic center. Increased blood supply to nerve-cells increases their functional activity, which diminishes with diminished blood supply, and ceases with entire failure of blood supply. Dilated blood vessels, proliferation of connective tissue and other evidences of chronic congestion, are found in limited areas in the brains of paranoiacs. And, lastly, as active nerve cells certainly generate more nervous energy than those which are inactive, and as their only source of energy is the blood; we must conclude that there is a relative excess of blood supply to the active cells.

Now, in the normal brain the cells have a certain amount of storage capacity, which differs considerably in different individuals, and at different times in the same individual. There are many people who go off at half-cock, whose mental activity never rises above hasty reflex action. So, too, those who do not usually act so rashly may exhibit in moments of physical depression a tendency to react to slight stimuli, which would not affect them ordinarily.

*In chorea there is an altered state of nutrition of the motor cells of the cerebro-spinal axis, by reason of which they lose in part their capacity for storing nerve-force, and discharge themselves prematurely.*

It is highly probable that in the normal brain the cells are charged almost to the point of overflow; for the time required for mental action is so brief that the cells must need but a small increment of blood to produce a discharge. Owing to the lowered resistance to this discharge in the choreic cells, the normal, or even less than normal, amount of blood will keep up a perpetual fusilade of nerve force.

To illustrate my meaning by a simple simile: the safety-valve on a boiler has an arm upon which there hangs a movable weight. The nearer the weight is to the valve, the lower the pressure at which the steam can rise until it escapes. In chorea the weight is

moved up nearer the valve, as it were.

It should seem that this alteration of nutrition may affect the ganglionic cells of the entire cerebro-spinal axis, or may be limited to those of the motor area of the cortex, or of the basal ganglia (Kirkes, Broadbent, Aitken, Hughlings-Jackson, *et als.*), or of the spinal cord (Chauveau, Carville, Bert, Legros, Onimus, Wood).

The investigations of Kirkes, Hughlings-Jackson and others established the fact that all tangible evidence of disease is often found in the corpora striata and the optic thalami; but it is equally certain that these ganglia are not the only seat of the disease. Marchi has shown that ganglionic cells are found in both corpus striatum and optic thalamus; so that the old theory that the former was associated with the function of motion, and the latter with that of sensation is no longer tenable.

Chauveau divided the spinal cord close up to the skull in dogs with general chorea, and found that the choreic movements persisted until the death of the animal several hours after.

Legros and Onimus announced, as the result of various experiments, that the nerve-cells of the posterior cornua, or the nerve fibres which unite them with the motor cells, are the seat of chorea.

Wood concludes that the basal lesion in the spinal cord of choreic dogs is a peculiar condition of the ganglionic or multipolar cells. He is followed in this by Victor Horsley and Prof. Putnam, of Boston.

It was formerly held that chorea is purely cerebral in origin, because of the cessation of the muscular contractions during sleep, and because the movements are usually unilateral at first or throughout, or else more pronounced on one side than on the other. But there are certain cases in which the movements continue during sleep. And the existence of spinal hemiplegia shows that unilateral affections are not always of cerebral origin. Foucherand has reported a case of purely spinal chorea in a child; the brain was normal, but the cord contained minute inflammatory foci. It may be that those cases

in which contractions occur during sleep, or those in which the contractions may be inhibited for a time, are of spinal origin.

Most of the causes of chorea fall under one or the other of the heads, qualitative or quantitative anæmia.

Under the first head are included the chorea of pregnancy, of chlorosis; in short, of general anæmia, from whatever cause.

That the chorea of pregnancy is not a reflex neurosis, but is mainly due to the hydramic state of the blood, is shown by the fact that emptying the uterus does not affect the chorea. In eighteen cases reported by Barnes and Goodell, removal of the foetus produced no amelioration of the condition in seven cases.

We find chorea following such diseases as produce a general anæmic state. It not infrequently occurs after scarlatina, measles and whooping cough.

Under the head of chorea produced by quantitative anæmia is to be included that which occurs at or about the age of puberty. Beneke's researches show that, as children approach puberty, their arteries become relatively smaller and smaller; which, of course, must cause quantitative anæmia of the nervous system. The same observer remarks that the female heart remains both relatively and absolutely smaller than that of the male; so that it is so much the less able to overcome the lessened arterial calibre. Young girls have likewise to contend with the as yet unaccustomed physiological drain of menstruation. These three facts—of narrow arterial lumen, insufficient heart and menstrual drain—account satisfactorily for the greater frequency of occurrence of chorea in girls than in boys. Out of 1348 cases collected by various observers, 366 were males and 932 females.

As producing quantitative anæmia is also to be classed, plugging up of the blood-vessels by capillary emboli. Kirkes first advanced what may be termed the English theory of chorea, viz.: that it is due to obstruction of the smaller vessels of the corpus striatum and optic thalamus by capillary emboli, which are minute vegetations detached from the valves of the heart in exuda-

tive endocarditis. Kirkes attributed the effect of these emboli to a mysterious "irritation of the nerve centres."

Hughlings Jackson attempted to show that this plugging of vessels occurred in the branches of the middle cerebral artery. Bastian showed that such emboli might be formed in febrile diseases by the cohering of white blood corpuscles. This view has also been maintained by Broadbent, Tuckwell, Ogle, Barnes, and other English writers; but it is entirely too narrow to cover all cases of chorea.

Under the head of causes of quantitative anæmia of the brain and cord are also to be placed thickening and bony induration of the meninges (Frerichs), hyperplasia of connective tissue in the brain, chronic interstitial encephalitis (Rokitansky, Golgi), the same condition in the cord (Steiner, Meynert, Elischer), inflammatory exudations from the meninges, thickening and deposit of lime in the adventitia of the blood-vessels of the corpus striatum, optic thalamus (Elischer) and cord (Rokitansky, Steiner, Meynert, Dickinson), capillary embolism of the cortical blood-vessels (Elischer), etc. Angel Money found that by injecting arrow-root and carmine into the carotid arteries of animals, choreiform movements were produced. Tumors in the posterior half of the optic thalamus may cause hemichorea, according to Charcot.

The second principal cause of the altered state of nutrition of the motor cells is hyperæmia. This has been found repeatedly in the brain and cord by such observers as Golgi, Elischer, Romberg, Ogle, Gray, De Beauvais, Hine, Brown-Séquard, Lockhart Clarke, Steiner, and many others. If the hyperæmia be of the venous or passive sort, the effect upon the tissues will be that of an anæmia. If it be arterial, the result, the involuntary discharge of nerve-force, will be the same. For, manifestly, if the storage capacity of the cells be reduced so that they cannot retain the normal amount of nerve energy, or if they be stimulated to an abnormal production of nerve-force by an excessive supply of blood, the outward manifestations of these two conditions will be practically the same.

Fright and worry are mental causes of chorea. Doubtless they produce nutritive disturbances; for it is difficult, if not impossible, to conceive of their acting in any other way.

A cause of chorea, which seems to me to have been overlooked, is the muscular activity of children. The age at which chorea most often develops is that at which muscular development and activity are most pronounced. It is reasonable to suppose that there is a corresponding development of the motor nerve-cells; that their nutritive processes are more rapid, and the resulting compounds more unstable than those of the other nerve-cells. If now any depressing influence or sudden strain be brought to bear, the nervous system gives way at its weakest point.

An evidence of this is the fact that chorea invades the muscles in the order of their mobility and activity. First the fingers, then the muscles of expression, a skip difficult to explain upon any other hypothesis than the one given. There is frequent mention of the early involvement of the fingers and the face. Almost invariably, in cases which do not come on brusquely, the first symptoms noticed are that the child drops things, writes badly, makes mistakes in playing the piano, cannot feed itself properly, then begins to make mouths, and to toss its head fantastically.

This order only holds good, of course, in functional cases. It would be interesting to observe whether, in such cases, the muscular contractions leave the muscles in the inverse order; whether the fingers are the last to improve. I can find very little evidence on this point.

The relation of rheumatism to chorea is still doubtful, and rests chiefly upon the authority of the English school. In 11,500 cases in the children's hospital under Sée, there were 48 cases of rheumatism without chorea, and 61 with chorea, which does not look as if the connection between the two were very certain. It should be born in mind, too, that Sée is a strong advocate of the causal relation between them. Many of the statistics gathered under the domination of this theory cannot be received at par, for the reason that heart mur-

murs and joint pains were regarded as sufficient evidence of the existence of rheumatism. Whereas, we now know that many of the heart murmurs in chorea are hæmic or choreic, the latter being probably due, as Wood suggests, to "the irregular contractions of the chordæ tendineæ, preventing the proper closure of the valves." Joffroy and Saric regard the joint pains as "choreal arthropathies of nervous origin." Hammond states "that the influence of rheumatism upon chorea is no greater than that of a depressing agent to the organism." Steiner, of Prague, found only four out of 252 cases of chorea which could be traced to rheumatism. In 219 cases of chorea treated in the Hospital for Sick Children, London, there was a rheumatic history in 20 per cent.; but 15 per cent. of all children have rheumatism. Sinkler found a clear history of rheumatism in 37 out of 279 cases.

If rheumatism occupied a causal relation to chorea, then chorea should occur oftenest at that period of life when rheumatism is most prevalent; but such is not the case. Out of 282 cases of chorea reported by Sinkler, 217 occurred between the ages of six and fifteen. Of 191 cases in the hospital for children at Paris, 151 occurred between six and fifteen years of age. In Guy's Hospital, Pye-Smith found, from two to fifteen years old, 111 patients; from sixteen to thirty-eight years old, 25. On the other hand, in 4,908 cases of rheumatism admitted to St. Bartholomew's Hospital, 8.1 per cent. occurred between ten and fifteen, as against 80.5 per cent. from fifteen to forty-five.

Nor do we find chorea most frequent in localities where rheumatism most prevails. The investigations of Hirsch and Weir Mitchell show that chorea is no more frequent in cold climates than in warm, which cannot be said of rheumatism. Rilliet states that acute articular rheumatism is of unusual frequency in Geneva, while chorea is very rare. Not one of his choreic patients had had rheumatism. Further, that chorea attacked girls oftener than boys, in the proportion of 2 to 1; the reverse of which happens in rheumatism. He considers the rheumatic nature of chorea as absolutely undemonstrated. Romberg denies any dependence of chorea

upon heart affections. Wunderlich considers the so-called rheumatoid pains as excentric projections of cerebral states. The only possible connection that can be traced between the two is the fact that they occur most frequently during the spring and summer months; which may be interpreted as simply indicating that the same meteorological conditions which favor the development of the one favor also the development of the other.

In the end we shall doubtless relegate this theory to the limbo of traditional beliefs founded upon authority and coincidence, not supported by statistics.

Very rarely is it that the alteration of nutrition affects exclusively the motor cells. In the other cells it produces the same characteristic, premature discharge of nerve-force. "The general intelligence is ordinarily well preserved; but there can often be noticed a temporary weakness of memory, and the loss of the power of fixing the attention upon any one subject for a length of time is usually very decided." (Wood).

It has been claimed that the mental symptoms were caused by the loss of control of the muscles, and were merely the result of worry. That this is not the fact, and that the psychical cells are involved in the nutritive disturbance may be shown by the following facts:

The mental may precede the muscular symptoms. Says Von Ziemssen: "When there are prodromal symptoms, they consist of a striking change in the temper; a fretful, discontented or apathetic behavior in children formerly cheerful and brisk; *unusual changeableness of temper; sudden and causeless change from sadness to mirth, or the reverse.*"

The relations between chorea and other nervous diseases go to establish this point. A close connection has been found between true psychoses and chorea, and numerous coincidences of chorea with mental disorders have been observed; such as alternation of chorea with dementia paralytica (Tommasi); "hallucinations of feeling, hearing, smelling, and apprehension of being poisoned, with great confusion of mind, in a case of chorea in which, after long continued prodromic symptoms, the cho-

reic twitchings began in the fingers and extended to other parts. Recovery in two months." (Ritti.) Chorea is often associated with hysteria, especially that form described by the French writers as "electric chorea."

Again, after recovery from chorea, it is often a considerable time before the powers of attention, ratiocination and memory are fully restored.

Lastly, cases of right hemi-chorea are attended by true aphasia.

Sometimes the nutritive disturbance extends to the sensory cells and to those of the special senses, producing, according to Charcot, a general hyperæsthesia and hyperalgesia of the skin and the senses—in other words, lessened storage capacity and a tendency to premature discharge on the part of the cells.

Even the nerve-cells of organic life may participate in the lowered nutritive tone, as is shown by the occurrence of cardiac and gastro-intestinal disturbances.

During sleep or narcosis from chloroform or other drugs, arterial pressure and the tension of nerve-force fall so low that the nerve-cells are able to contain themselves. But the minute the patient awakes and the blood-pressure and activity of the cells increase, the contractions begin. In many patients, any attempt to use the muscles involved increases the disturbance. As there is reason to believe that the voluntary contraction of a muscle induces a relative hyperæmia of its nerve-center, this fact will be seen to fit into the hypothesis advanced in this paper.

In the large majority of cases the changes in the nervous system are of such a character that they cannot be detected *post mortem*. Comparatively few of the cases prove fatal, and in most of these the pathological findings are nil.

Chorea is closely allied to hysteria. I believe that the same altered state of nutrition which produces chorea when it affects the motor cells, produces hysteria when the psychical and sensory cells are involved. These cells exhibit the same tendency to involuntary, incoördinate, abortive discharge which is found in chorea. The two diseases shade into each other so that it



is often difficult to tell where one leaves off and the other begins. Hence the use of such terms as "hysterical chorea." The mental symptoms in chorea are plainly hysterical in character—the "unusual changeableness of temper, sudden and causeless change from sadness to mirth," as described by Von Ziemssen; so likewise are the rarely occurring hyperæsthesias of the various senses mentioned by Charcot.

Hysteria, like chorea, occurs oftener in women than in men, and no doubt for the same reasons, and is found oftenest during the period of sexual development. Landouzy gives the following statistics: Out of 351 cases of hysteria, 48 occurred between the ages of 10–15, and 105 between 15–20. Briquet gives, from 10–15, 98 cases, from 15–20, 140 cases, out of 426.

General anæmia, from whatever cause (Jolly) and hyperæmia of the nervous system (Rosenthal) play an important part in the genesis of hysteria, as also in chorea.

Hysteria, like chorea, occurs oftenest in the spring, and is induced by the same meteorological influences.

The excessive muscular activity of children, which has been mentioned as a probable cause of chorea, finds its parallel in hysterical cases in an abnormal psychical activity. One need only observe school-girls returning from school to discover this. What tremendous emphasis, what violent metastases of thought, what hyperbole and exaggeration, what use of the superlative degree! Notice too their restlessness. Surely they are already choreic and hysterical. Have they not choreic grins and hysterical giggles?

From these and other considerations, it is highly probable that hysteria and chorea are manifestations of the same pathological condition affecting different nerve-cells.

It is very possible that the occupation neuroses and the tremor of multiple cerebro-spinal sclerosis are allied to that form of chorea in which the muscular disturbance appears during voluntary exertion.

In children who are predisposed to chorea, the most important means of prophylaxis are light, systematic exercise, short of tire, and the free use of

fat as a food. There are other important means than these, of course. The systematic exercise is best obtained in a well directed gymnasium. Where this is lacking, its place may be supplied by horse-back riding or by such games as battledore and shuttlecock or tennis, though the latter is apt to be carried to excess. No one can doubt the beneficial influence of systematic, general, gentle exercise upon the developing motor nerve-cells.

With regard to the second requisition, an important distinction is to be observed between fat and grease, which is fat melted out of its connective tissue capsules and started on the *facilis descensus* of retrograde metamorphosis. It coats over and infiltrates the albuminous food and prevents the action of the gastric juice. It is prone to evolve butyric acid. Can anyone conceive of a more fermentable mess than mashed potatoes and gravy? When fat is taken into the stomach in its original form, the gastric juice dissolves the connective tissue network, and the released globules float up to the surface and remain there, serenely supernatant, until the stomach digestion is completed.

Empirically fat has been found to be the nerve-food *par excellence*; while the belief in phosphorus rests largely upon a German epigram (Ohne Phosphor kein Gedante).

Little is to be said with regard to the treatment of chorea, except to call attention to the superior results obtained by dynamic methods. Blache reports the following results from massage. Of 108 cases, 34 were cured by 18 *séances*, and 68 by 33 *séances*. He states that "none of the methods of treatment applied to chorea has given so many cures as massage," and that "the cure is more durable." The average duration of chorea under massage is only about half what it is under other forms of treatment.

Electricity has also given good results, sometimes succeeding when everything else has failed. Benedikt reports twenty cases cured by mild, brief galvanization of the spinal cord. Beard and Rockwell cite such cases as the following: General chorea with inability of the patient to walk, feed himself, or dis-

tinctly speak—recovery under central galvanization after the failure of Faradization and medication. Chorea of ten months standing in the left side and right arm of a girl of eleven—recovery in ten weeks under central galvanization. Choreic disturbance of the head of five months' duration—recovery under less than twelve applications of general Faradization. Chorea of a year's duration—improvement during treatment and rapid recovery after its cessation, etc.

Many other electricians speak in the highest terms of the good effect of electricity in chorea. It is not necessary to quote them here.

Warm baths are an efficient means for quieting the muscular unrest, and seem to exert a curative influence.

Baudelocque cured thirteen out of fourteen children in twenty-four days. Baffin, Guersant, Jadelot and others have got equally good results. See cured fifty out of fifty-seven cases in twenty-two days (Soltmann, in Gerhardt's *Handbuch der Kinderkrankheiten*).

The treatment by drugs serves to exemplify the remark of Rufz, that you can cure chorea with anything.

The importance of rest has not been insisted upon sufficiently. John Van Bibber, of Baltimore, has cured several cases by keeping them in bed in a darkened room.

Récamier, with the Gallic love of the novel and the theatrical, and possibly with an eye to advertising himself, had his choreic patients march daily, with regular step, to the *Place Vendôme* behind a drummer.

The ideal way to treat a case of chorea is to "Weir-Mitchell" it, if one may be allowed to foist such a verb upon the medical public; for in the vast majority of cases, chorea is simply a form of local neurasthenia.

I have advanced this hypothesis concerning chorea largely with a view to eliciting discussion. So far as I can see, it is consonant with nerve-physiology and with the known facts of chorea. It now remains to be seen whether it will stand the test of criticism and rise to the dignity of a theory.

## MATERNAL IMPRESSIONS.\*

BY J. N. RICHARDS, M.D.,  
Fallsington, Pa.

THERE is, without a doubt, a widespread general belief that the fœtus may be marked or deformed while in utero by fright, shocks or other deep impressions being made upon the mind of the pregnant woman. And it also seems to be the general belief, with the laity at least, that nearly, if not all, the so-called "mother's marks" or other congenital deformities are caused in this way. While this belief is almost universal with the laity, it is also shared to a large extent by the members of our own profession. At the August meeting of our county medical society, this subject was introduced by a distinguished surgeon from Philadelphia, in connection with a case of hare-lip that was before the society; and I think that fully two-thirds of those present were inclined to consider such deformities often, if not generally, due to maternal impressions.

Occupying, as I did then, nearly neutral ground upon this question, I concluded to investigate the matter in my feeble way and see if I could find any good reason for this generally accepted doctrine. In the first place, there seems to be an innate desire in the human family to run after the supernatural—a broad strata of superstition in us all, and a strong disposition to attribute anything we cannot comprehend to the supernatural. I contend that the proper mode is, when we encounter a problem that is beyond our ken, to confess our ignorance, and conscientiously go to work to solve the mystery, suspending conclusions until they are fully substantiated by reason and facts.

The believers of this doctrine of maternal impressions seem to receive their inspiration from the thirtieth chapter of Genesis, wherein it is recorded that Jacob placed speckled rods before the flocks of Laban, and "they brought forth cattle ring-streaked and striped." This I consider as being of the nature

\* Read before the Lehigh Valley Medical Society.

of an implied command from God, and the result a reward to Jacob for his obedience and faith; just as he commanded Moses to smite the rock in the wilderness, and water flowed forth. And as water refuses to flow from rocks now when smitten by rods in the hands of our modern disciples, so I imagine that our cattle bring forth young the colors of which are not influenced by the color of rods that happen or are by design placed in front of them when they conceive. If this theory held good, then the breeding of some of our fancy stock, where color is often such an item, would be reduced to an exact science. As before stated, we have inherited a vast amount of superstition, that, notwithstanding all our boasted education, still clings to us, and many of the popular beliefs of to-day are but heirlooms that have been handed down to us from the Dark Ages—modified, perhaps, to suit the times—and are taken for granted simply because our fathers and mothers have told us so, and we have not taken the trouble to investigate them to see if they ever had any foundation in fact.

Dr. Taylor, of Philadelphia—who seems to be, from the number of cases he has reported, a firm believer in maternal impressions—claims that these popular beliefs are nearly always founded on facts, and are worthy of our consideration. Dr. Samuel C. Busey, of Washington, says: "Any prevalent, concurrent belief must be founded upon an element of truth." I think history fails to sustain these statements in many cases. In earlier years witchcraft was an accepted belief, and many so-called witches were condemned to severe punishment and even death, after prolonged trials before grave and learned tribunals. So with spooks, ghosts, hobgoblins and the return of departed spirits. And even yet these beliefs are by no means eradicated from the human family, even in our highly civilized communities.

Many of our farmers, even in this enlightened age, plant their seeds, butcher their stock, cut their timber and make predictions as to the state of the weather according to the signs of the moon. These are or have been wide-spread, general beliefs. Are they

true, or have they ever had any foundation in fact? I think not. In my obstetrical experience I have found there is a very general belief among women that, during labor, the parturient woman must keep her chin well down upon her chest, must not raise her hands above her head, for fear she will "draw it all back;" that the pregnant woman must not raise her arms above her head for fear the umbilical cord will be coiled around the neck of the fetus. Is there any foundation of fact or rational cause for such beliefs here? Yet these things are generally asserted and firmly believed.

It is well known that we have peculiar markings and deformities in plants and the lower animals corresponding in many cases with the deformities found in human offspring. These deformities in vegetables and fruits are in many cases no less remarkable and no easier of explanation than these so-called "birth marks," and yet I know of no one claiming that they are due to maternal impressions. Yet there are many who also claim that so deep an impression may be made upon the *mind*—if you please to call it such—of the lower animals that may deform the offspring. It is well known that many of our wild animals when in captivity bring forth young either dead or imperfectly developed, which die soon after birth. Nearly all the young lions born in our zoological gardens have cleft palates. Are these due to maternal impressions or lack of their normal food and want of exercise? And again cases are not so very rare wherein our domesticated animals bring forth young with too few or too many limbs, with cleft palates, acephalous monsters, etc. Even in our domesticated fowls I have seen many digressions from the true type—chickens, ducks and turkeys with tufts upon their heads, deformed feet, toes, bills, and feathers; ducks and chickens with three legs, etc. If these deformities are due to maternal impressions, pray, which mother was the impression made upon, the one that laid the egg or the one that hatched it? It is from the egg of the oviparous animals we have learned more of embryonic life than from any other one source; and it is, as I take it, a true type

of all embryonic development; and if this theory of maternal impressions will not hold good here, how can we demonstrate with any degree of plausibility that it does hold good in the higher animals and in man? Dr. Taylor in the *MEDICAL TIMES* of November 26, 1876, in attempting to prove that these impressions may cause markings of the offspring of animals, cited the often quoted case of Lord Morton's mare of chestnut color, that was covered by a quagga—a wild ass of the zebra species from Africa—in 1815, and after a pregnancy of eleven months and four days gave birth to a hybrid resembling the quagga. She was subsequently served by a black Arabian stallion in 1817, 1818 and 1821, and produced successively three foals, all of which resembled the quagga—the first of which, however, in a greater degree than the third. Now, granting that this case is entirely authentic, of which I have no doubt, is it reasonable to suppose that so deep an impression was made upon the mind of that mare in 1815 that it marked her foal born in 1822? If so, she must have had a very impressible nature. Surely this is carrying the "influence of mind over matter" doctrine a little too far. A more plausible theory for such phenomena, I think, would be that some of the fecundating material had been left over that marked the offspring of the subsequent pregnancies. We have in the queen bee something analogous to this. She receives the drone or male bee but once during her life, yet she has the power to lay, at will, an *unfecundated* egg that hatches, but always produces a male bee, commonly called a drone. I may add, too, by way of supplement, that a queen bee that has never met the drone lays eggs that hatch, but they always produce male bees. So it may be in those cases where well bred female dogs by accident have been lined by mongrels, who in subsequent pregnancies, after being served by thorough bred dogs, produce young with tracings or markings peculiar to the mongrels. Carpenter in his physiology states, "some of these cases appear referable to the string of mental impression left by the first male parent; but there are others which render it

likely that the blood of the mother imbibes from that of the foetus, through the placental circulation, some of the attributes which the latter has received from its male parent, and that the female may communicate these, with those proper to herself, to the subsequent offspring of a different male parentage;" and cites a well-known fact that a woman may during gestation or after parturition develop *secondary* syphilis, who has never had the primary symptoms, while the father shows no recent syphilitic disorder. For, if he has communicated a syphilitic taint to the foetus, the mother may become inoculated with it through her offspring in the manner just stated. I cannot stretch my credulity far enough to believe these phenomena are due to the impressions made upon the lower animals years before. If this theory is not true in regard to the lower animals, then by what process of reasoning can we claim it to be true in the human? Nature does her perfect work by certain and well-established laws, and these processes are the same whether in the human ova or in those of the lower animals. If these processes are interfered with occasionally, by causes of which we are so far ignorant, in the egg of our oviparous animals, why should not the ovum of the human female occasionally fail to bring forth a perfect being?

It strikes me that those who accept this doctrine of maternal impressions at first sight as it were, forget their anatomy and physiology. It is needless for me, if I were able, to give you the minute history of the development of the embryo, but suffice it to say that as you are all aware, the only connection between the mother and foetus, after the third month at least, is through the placenta and umbilical cord. That there is no *direct* blood communication even. That the respiration and nutrition of the foetus is carried on wholly by a process of osmosis. That there never has been, so far as I have learned at least, any nervous communication discovered between the maternal and foetal portions of the placenta—or no nerve trunks or filaments found in the umbilical cord—unless it be near the umbilical extremity of the same. Scan-



zoni claims there are "isolated nerve branches from the plexus hepaticus for the vein and from the plexus hypogastricus for the arteries," and that they extend three or four inches from the umbilicus. Virchow denies this and claims he has never been able to detect any nerves in the cord at any period of its development. Further, as you no doubt remember, that by the end of the second month of utero gestation, the fetal extremities are plainly visible; the fingers and toes well defined, rudimentary of course. That the intermaxillary portion of the superior maxillary bone unites with the palatine arches and closes the cleft by the end of the third month, and that by the end of the fourth month of pregnancy the fetus is quite a presentable being—with fingers, toes, lower and upper extremities, eyes, nose, mouth and all parts, with the exception of the size of the head in nearly the same proportions as at full term.

Now, it strikes me that if it is a fact, that all nervous force originates in the nervous centres and is transmitted from thence by and through the medium of the nerves—and only in this manner—that where there are no nerves there can be no sensation or other nervous influence; that after the death of or division of a nerve trunk, there can be no more nervous force in impressions transmitted to the parts formerly supplied by such nerves. I say if this is a fact in *extra uterine* life it should by all processes of scientific reasoning—in my feeble judgment—be assumed to hold good during *intra uterine* life; and right here I must confess is the greatest stumbling block to my having faith in maternal impression. To ask me to believe, that allowing an impression to be made upon a pregnant woman, and that impression to be reflected to her uterus, thence through the umbilical cord, 15 to 20 inches long—consisting wholly of two veins, one artery, connective tissue and gelatin of Wharton—and after surmounting this seemingly unsurmountable barrier, have vitality enough left to select and deform such regions as the mother may in some cases at least decide upon, is presuming more upon my credulity than I allow. Yet this is nothing more than

we are asked to believe, as a few cases I shall quote will illustrate: So far as my feeble judgment goes, I deem it evident that after a limb or part is once formed, in order to change such part there must of necessity be some tangible and appreciable force exerted. And whence the force? There have been many cases reported of children being born with amputated legs, arms, fingers, or toes, as being caused by the mother being shocked by seeing some one with an amputated limb, during the latter stage of pregnancy, or at least after the limbs of the child are generally definitely formed. Now it seems to me that after a leg, arm, finger or toe is once formed, no amount of mental effort or shock made upon the mind of the mother, whether momentarily applied or continued during the remainder of her pregnancy, can amputate or absorb said arm, leg, finger or toe. Nothing but direct force could remove it if it was there before.

We know the umbilical cord does become knotted upon itself, does encircle the child's neck, and in a number of well authenticated cases has amputated one or more of the limbs. Perhaps one of the most common deformities met with, that is attributed to the influence of maternal impressions, is hare-lip and cleft palate; the mothers claiming that they have been frightened by a rabbit, or by seeing a child or some one else suffering from this deformity. This cleft is a normal condition of the fetus at a certain stage of its development; but by the end of the third or beginning of the fourth month of pregnancy it is closed up. Hence, all cases of this character, that are attributed to this cause after the beginning of the fourth month, go for naught. The cleft in the lip is closed considerably earlier, possibly by the end of the second month. Prof. Albert Vandever says: "Maternal impression may be one of the causes of hare-lip, and yet evidence of such cause is so often wanting as to lead us to doubt;" and claims that he frequently finds slight notches or partial defects in the mouths of one or the other of the parents; and often has had occasion to call the attention of his class as to this point in the study of these cases. And

he further claims that close pregnancies form a factor in causing this deformity. That it is not unusual to see the same patient with extra thumbs or fingers, spina bifida and the like, and cites a case of a child that was brought to Prof. Alden Marsh with hare-lip, who had cleft palate, an extra toe and finger on each foot and hand, double hernia and club-foot. He quietly said to the poor mother: "My good woman, you had better try it over again." That poor mother must have had a sad time of it during her pregnancy if each of those deformities were due to some separate fright or shock.

It is a fact as can be attested by every one who has had any obstetric practice, that the majority of women fully expect their children to be marked at birth, and usually the first question they ask after the completion of the second stage of labor is, "is the child all right." This is not strange when we consider that they have been taught from infancy almost, that women can and do mark their offspring in various ways, and during their pregnancies this lesson is especially impressed upon them by their kind, but over solicitous and curious neighbors. And yet how few children are born in any ways deformed.

In order to get the opinions of some of my personal friends and others upon this subject, I mailed a circular letter of inquiry to fifty physicians, embodying the following questions: 1. Do you believe it possible for the fetus to be marked or deformed by a shock or impression made upon the mind of a pregnant woman? 2. Do you know from your own *personal knowledge* any cases wherein such impressions have, in your opinion, resulted in deformity or marking of the child? 3. At what stage of gestation has the impression been made? 4. Would you give me the facts in one or more cases that you have personal knowledge of?

There have been so many cases reported upon the authority of the old ladies, and the young ones too for that matter, in every neighborhood, that are so extremely wonderful, but savor too much of the character of the startling mad dog and ghost stories we were accustomed to hear during our youth

to be worthy of credence. For this and other reasons I was anxious to hear from a fair number of reputable physicians as to their own practical experience and observation—I desired no hearsay evidence.

Among those to whom I mailed my letter of inquiry were three veterans—men of many years' experience and whose integrity of character and veracity could not be assailed. The first one of these to reply was our worthy Dr. Traill Green. To all my queries, he, in his usually terse style answered "no," and when he says "no" you generally understand what he means. The next one of these veterans to reply was Dr. A. Rothrock of McVeytown, Mifflin County, Pa., who I believe graduated the same year Dr. Green did. He writes me that he is a believer in maternal impressions so far as *naevus materni* are concerned, at least, and reports the following: He attended a Mrs. A. on the 13th of May, 1835, and when the child was born it had a *naevus* upon the upper lip. The mother gave as a cause for this that she was struck upon the lip with a piece of sausage the preceding fall, when they were butchering, by one of the men. The Dr. presumes she was about the end of the third month of pregnancy. This is rather a remarkable coincidence to say the least, and coming from the source it does, I am bound to consider it entirely authentic. But as the upper lip is, normally, tolerably well formed some time before the end of the third month, I fail to see how it could be changed by the process just stated.

Dr. Hiram Corson, that veteran of veterans, replies that he is also a believer in maternal impressions, and cites two cases that came under his notice, which I will quote in his own words. "Forty years ago two women, who were with me in attendance upon an obstetric case, went at 1 o'clock at night to a house a few doors away, there as they entered they were confronted by a man with blood streaming down his face and neck from a cut on his scalp made by a rough stick of fire-wood wielded by a strong man, while the injured man was lying asleep on a lounge. Both these women were pregnant. I attended them both afterwards. The one child had a splash

of red on the back of its neck as large as its hand. The other one had had a bright red mark on its forehead and left cheek. Quite striking both of them were, and both disappeared entirely in a few months." The doctor does not state at what stage of the gestation this fright occurred.

I have seen several children born with the redness of the skin that fades in a few weeks or months, but do not remember any of my cases being attributed to maternal impressions. When my first child was born she had a bright red spot, nearly the size of her hand, upon the back of her neck just below the occiput. Upon calling my mother's attention to it, she said, "that's the Patterson mark," and stated that two or three generations on her side of the house had similar marks in the same location. When my little boy was born over four years later he had a similar mark also upon the back of his neck. They have both disappeared.

Dr. D. P. Miller of Huntingdon, Pa., writes me he has been converted from a skeptic to a firm believer in maternal impressions by the following case:

"In the latter part of July, 1881, a man was injured by a car passing over his right foot. He was brought home and to his house, where I was called to dress the injury. His wife was present and witnessed the dressing, and at the time was in the *latter part of the fourth month* of pregnancy, although I was not aware of the fact at the time. On the 6th of January, 1882, I attended the wife in confinement, and when the child was born it was minus the fingers on both hands and the toes on the *left* foot. The arms and hands were normal to the metacarpophalangeal articulation. The fingers at this time are all contracted to a point, and not as long on either hand as the first phalanx should be and minus the nails." Now mark, here is a woman who is worried over her husband's injury to the right foot; who, in a little over five months, gives birth to a babe with toes absent on *left* foot and fingers absent on both hands. We have seen that the fingers and toes are well formed by the end of the fourth month, normally, and if they were so in this case would the mother's worry over her husband's injury have

caused them to disappear? Many of you, no doubt, would answer in the affirmative; but I think it would require a more tangible and powerful force than the mother's mental agony. I *may* belong to that class of skeptical non-believers that won't be convinced; but if such is the fact I am not aware of it. I am open to conviction, but must have such proofs as would convince reasonable men on other subjects.

Prof. William Lusk, Professor of Obstetrics of Bellevue Hospital Medical College, writes: "I have had many instances where the mother constantly dwelt upon some deformity in the husband, or other children; has had settled melancholy in consequence, and has given me daily assurance during pregnancy that the child would be marked. The children invariably have at birth been healthy and perfect."

Prof. William F. Waugh, of Philadelphia, writes me: "I never attended a primipara who didn't believe there was danger of her babe being *marked*, and never knew a case in which the foreboding proved true."

Several others have reported to me cases similar to those I have quoted; and several others write me that they have had no knowledge of any such cases, but are not willing to express an opinion as to the possibility of such.

Our Secretary, Dr. McIntyre, very kindly sent me a list of the papers published on this subject during the century, taken from the index catalogue of the Surgeon-General's office. There, through the courtesy of Dr. William B. Atkinson and the librarian, Mr. Fisher, I had access to the library of the College of Physicians of Philadelphia, and looked up as many of these cases as my limited time would allow.

The most remarkable one I met with was reported by Dr. William Hunt, of Philadelphia, in the *American Journal of Medical Sciences* for 1881. A finely-formed mulatto woman—previously healthy, husband and other children the same—was brought to the Pennsylvania Hospital severely and fatally burned. She was eight and one-half months' pregnant. Fœtal heart beating very rapidly and forcibly, and continued to do so for over twenty-four hours; then ceased; child then supposed to be

dead. Labor set in three or four hours later; child well formed, but blistered over about same parts of surface as the mother was; blisters full and apparently of recent origin. Pemphigus, syphilis, maceration, etc., were suggested, but all excluded. Woman died in four days after admission. I had a personal interview with Dr. Hunt in regard to this case. He does not attempt to explain this condition of the child. Says: "There are the facts; I know nothing more about it." Of course, I cannot explain it either; neither can I explain the occurrence of ulcer of the duodenum after severe surface burns; but believe there is a physical and not mental cause for both of them.

Dr. Miller, of Peabody, Kansas, reports a case I have seen quoted several times elsewhere. Lady suddenly seized with intense longing for oysters, which she expected her husband would bring home with him, but greatly to her disappointment he forgot them. Feeling confident her child would be marked, and also wishing to prevent its being deformed upon any exposed part of its person, she clapped her hand upon her buttocks. The child was born with a well-marked oyster upon its buttocks. Another similar case I have met with: A lady, pregnant, was intensely frightened upon seeing their barn burning, covered her face with her hands. Her friends remonstrated with her, telling her she would mark her child's face. She says: "I will mark it here, then," slapping herself upon her buttocks. Her child was born with a fire mark upon its buttock. So also the case of Mrs. P., reported by Dr. Prentess, *PHILA. MED. TIMES*, vol xii, page 385. Her visitor's face was marked with a bright scarlet mark which made a profound impression upon Mrs. P., who decided that if her babe must be marked she would, like the woman quoted above, mark it upon its buttocks and with the desired result. These cases are repeatedly quoted and apparently believed by some. But do you believe such yarns? I am very confident I do not. I am not yet ready to believe it is possible for a foetus to be marked at all by any impression made upon the mind of the pregnant woman.

But to assert that a woman may at will select what part of the foetus may receive the deformity, is, I consider, the sheerest nonsense.

I hope I have not appeared egotistical in this matter, and do not claim that I must of necessity be right. I simply, so far as my judgment goes, believe I am. I have too much regard for the integrity and ability of many of those who take a different view, to doubt their sincerity. Yet after giving this matter my careful attention, I am forced to the conviction, that in my opinion, it is not possible for the foetus to be marked or deformed by a shock or impression being made upon the mind of a pregnant woman.

In taking this position, I am very well aware I am taking the unpopular side of the question. While this may be presumptive evidence that I am wrong, it is not conclusive by any means. One who is in the apparently hopeless minority is not always wrong, as we have abundance of examples to testify. If the multitude had always been right and the individual wrong, then, to-day, we would have been ignorant of the circulation of the blood, the inestimable benefits of vaccination, and the grand achievements of ovariectomy.

Now, in conclusion, allow me to summarize the difficulties in the way of my having faith in maternal impressions.

1. We have the same, or corresponding deformities in plants as we have in human offspring, and which are often as difficult of explanation.

2. In the young of oviparous animals, young that are developed entirely outside of the mother's body, we find the same corresponding aberrations from the normal type.

3. I cannot imagine the lower animals to be endowed with such sensitive organisms as that this influence of maternal impressions should be potent enough to mark their progeny.

4. If plants and the young of our lower animals are deformed in some mysterious way that cannot be attributed to the influence of these maternal impressions, why may not the human embryo be deformed in the same manner?

5. Nature's laws are fixed and unalterable, and the same forces acting



upon the same matter should and do produce the same results, whether it be in the egg or the chick, or in the ovum of the human female.

6. Out of the very many women who are shocked, and fully expect their children to be deformed, but an infinitesimal proportion are so. While in a large proportion of cases, wherein the children are born deformed, the mother has no recollection of any shock or fright. I can't believe nature does her work in any such haphazard way as this.

Finally, to all those who have so kindly responded to my letters of enquiry, I wish to return my hearty thanks.

### MEDICAL CASES IN THE COURTS.

BY HENRY A. RILEY, ESQ., NEW YORK.  
SUNDAY SODA.

Some druggists of Pittsburgh, Pa., were not long since convicted of the offence of selling soda water on Sunday, and about sixty of their fellows came together the other day and decided to carry the cases to the Supreme Court on appeal. A committee appointed to consider the whole matter reported that "the only way to remedy matters was to have the obnoxious blue laws either repealed or amended, so as to allow druggists to sell non-intoxicating beverages on Sunday." A bill to accomplish this was ordered to be framed and presented to the Legislature at its next session.

Dr. William A. Hammond, of New York, has an interesting article in the *North American Review* for December on

#### "MADNESS AND MURDER,"

in which he takes a position very different from that held in some quarters. He does not stretch the opportunities for escape which all murderers who are alleged to be insane possess, but would apparently hold them directly responsible for the results of their crimes.

Speaking of the Whitechapel murderer, he says: "When arrested the question of how to dispose of him will arise. In what I have said I have assumed him to be a lunatic of some kind. If a certain degree of maudlin sentimentality should prevail, he will

be placed in a lunatic asylum, and in the course of a few years may be discharged as cured. But such insanity as his is never cured. Doubtless while an inmate of the asylum his conduct will be of the most exemplary character. He will dissemble for years, and will deceive the very elect among experts in insanity. Superintendents and clergymen, and various other high personages, will unite in testifying to his thorough change of heart and Christian bearing, and when he is discharged, with the blessings of all with whom he has been associated, he will begin to commit another series of murders fully as atrocious as those for which he has been sequestered. There is but one way to deal with a person like this Whitechapel murderer, and that is to hang him as soon as he is caught. He is an enemy to society, and is entitled to no more consideration than a wild beast that follows his instinct to kill. Laws are not made for the purpose of enforcing the principles of abstract justice; they are enacted solely for the protection of society."

#### EXTENT OF LIABILITY FOR ACCIDENTS.

In a case brought, not long since, against the Brooklyn City Railway Company, for injuries to a child by which it became necessary to amputate her leg, the question arose whether there could be a recovery for future medical services. The action for damages was brought by the father on the ground of loss of services, which is the only ground recognized by which a parent can sustain an action for injuries suffered by a minor child. The trial judge allowed a recovery for medical services to be rendered in the future; but the Court of Appeals holds that this was improper. The Court said: "The prospective damages for loss of service recoverable in such a case as this may never in fact be sustained. But as only one action can be maintained against a wrong-doer for a single wrong, the law, from necessity, permits consequences not yet fully ascertained, but which are reasonably certain to happen, to be anticipated, and a jury is allowed to estimate damages for future loss of service in the light of experience and of such evidence as can be given. The damages

allowed in this case for prospective surgical expenses have still another element of uncertainty. If recoverable by the parent, it must be upon the ground of the parent's obligation to maintain the child. But not only may the parent die and the child die, thereby rendering the surgical expenses unnecessary, but the parent may become wholly unable to pay for the services if required, or the child may be treated in a hospital or at public expense, as was in fact the case in this instance when the child's leg was amputated. There is adequate reason for permitting the parent to recover medical or other expenses actually incurred, consequent upon an injury to the child from the wrongful act of a third person."

As will be seen by this last statement, a recovery for past medical services is allowed; but for future services there can be no recovery by the parents. The child, in a separate suit, however, can recover on its own behalf the estimated cost of medical services rendered probably necessary by the injury.

An interesting decision affecting druggists has just been decided by the Iowa Supreme Court. A. C. Hoogland was indicted and convicted in Washington County, Iowa, on a charge of maintaining a nuisance by the unlawful traffic in intoxicating liquors. He was a practising physician at Brighton, and owned a drug store. He obtained a permit in December, 1886, from the County Board of Supervisors, allowing him to sell liquor for medicinal and other purposes, not forbidden by law. It appeared that several sales were made in the next few weeks, and a jury held that the druggist had violated the law, although the witnesses testified that they were all sick and needed the liquor. The lower court fined the druggist \$1000. The Supreme Court on reversing the decision of the lower court says: "The finding that the defendant had reason to believe that the applications to purchase were not made in good faith is contrary to every fact testified to by every witness in the case. It is equivalent to finding that every witness for the State as well as the defendant, were wilful and corrupt perjurers. Verdicts must be founded on facts, not upon mere suspicion."

## A NEW HYPODERMIC TABLET SYRINGE.

BY WM. C. COX, M.D., EASTON, PA.

IN bringing before the profession another hypodermic syringe, I do so with the full knowledge of the numerous and varied kinds already in the market; but at the same time am also aware that, until I obtained the one now before you, none were perfectly satisfactory, and I found the inconvenience and loss of time in the use of a tablet syringe so great as to almost cause me to discard it. Having the various objections to the different syringes in mind, I suggested to the Messrs. Tiemann & Co. that they apply their new process of vulcanizing the hard rubber attachments to the glass cylinder and



have the coupling of the needle to attach over all. The essential improvements are that the joints of hard rubber being vulcanized to the glass cylinder prevents any possible leakage, and the needle screwing on the outside of the cylinder permits the introduction of a tablet with no delay or trouble; another advantage and that one of no small consequence is the ability one has to push up the packing if so desired. A solid cap is also made to screw on the cylinder in place of the needle, when not in use, thus preventing any drying out of the packing from exposure to the air. Two needles and a bottle for tablets complete the case. The vulcanizing of the rubber on the glass is so firm and perfect, that the two become as one, and it requires the blow of a hammer to separate them, and this occurs only by their being broken into fragments. The accompanying wood cut will explain itself. The ability to vulcanize rubber and glass together is one only lately attained, and then by the firm which manufactures this little instrument.

## THE DIET OF TYPHOID FEVER.

BY WILLIAM F. WAUGH, M.D.

THE question of feeding in typhoid fever is still far from being settled. In this country the profession, with scarcely an exception, relies wholly upon milk. In France, on the contrary, the Academy of Medicine heard, without a dissenting voice, the conclusions of Dujardin-Beaumetz, who rejected all forms of nourishment and went back to the water-soup of Hippocrates. His reasons are given with that explicitness which is a feature of the reasoning of the French. The intestinal glands are the seat of an affection which totally disables them from the performance of their functions. They are in a state of active inflammation, even of suppuration. The mesenteric glands are likewise involved in the inflammation, and incapable of performing their functions.

But cannot the patient be sufficiently nourished by those elements which are directly absorbed into the gastric veins? The rare cases of obstruction of the thoracic duct, and consequent starvation, show us that small as is the amount of nutriment conveyed to the body by this route it is vitally essential to the nutrition of the animal; for these cases perish with symptoms of starvation as surely as if no nutriment of any description entered their stomachs. The great loss of weight during the course of a typhoid fever, and the evidences of denutrition of the soft tissues, show that there is an exceeding likelihood that the assertions of the French observers are true; that the patient is sustained only by consuming his own tissues; and that the food which is introduced into the stomach, so far from contributing to his support, is only an additional source of danger.

It cannot be assimilated, and being introduced into the gastro-intestinal canal, the very focus of disease, swarming with the specific bacteria of typhoid fever and with putrefactive germs innumerable, rioting in the dead and dying tissues, evolving poisonous ptomaines, to be absorbed into the blood and multiply the evil effects of the disease, what other fate can occur to the milk here introduced than to serve as fresh material for decomposition? Hence

the abdominal pain, griping, tympanites and diarrhoea; hence the tendency to local suppurations and to cerebral symptoms, due to toxæmia; increased because the milk affords food for a greater number of microbes to live and generate ptomaines. This is what constitutes the strength of the plea for the use of germicides in typhoid fever, and induces us to claim that the first and most imperative indication is to render the intestinal canal aseptic. When this has been accomplished, we will see an immediate decrease in the tympanites, diarrhoea, etc., as well as in the other symptoms. Then the question of food recurs. Milk has been considered the food *par excellence*, because it has been specially elaborated and assimilated by the cow. But even then it must be digested and assimilated by the calf before it can become an integral part of the blood.

Why not take blood at once, then?

It is one step farther than milk. It has received the final finishing touches; it is no longer food; it is the vital fluid itself; and whatever there may be of that mysterious quality known to us as vitality, this fluid alone possesses it. In what way can it be introduced into the veins of the patient? If the operation of transfusion can be rendered comparatively harmless, and the means for accomplishing it can be placed in the hands of every practitioner, this would be the proper method of administration. Or, were the operation to be popularized, we might see a new race of specialists arise, who would rival the gynecologists.

This leads me to remark, that I have had recently under my care a case of obstruction of the thoracic duct. He was for a number of weeks in the hospital, where we had the fullest opportunities for observing him. Every variety of artificially digested food was given; but he found only one thing which agreed with him, and that was bovine. This he took with avidity; while with other foods he looked longingly at them, saying he was very hungry, but would not eat them. If he were prevailed upon to eat, he would throw up the food. Bovine was the one thing he took eagerly, and it always agreed with him.

This seems to me a very remarkable observation. I have made use of this bovine for some time as a stimulant in typhoid fever, but had not thought of it as specially valuable as a food in cases where the lacteals are disabled, until this case occurred. Bovine is simply blood, preserved by the addition of a small quantity of alcohol, rendered aseptic with a little boric acid, and thickened by the addition of egg-albumen. The boric acid is a valuable addition, as it assists our efforts to keep the intestinal canal aseptic.

I am not able as yet to say that this use of bovine is more than a suggestion; for since I began to use intestinal antiseptics my cases of typhoid fever have all recovered, the duration of the attack has been shorter and convalescence more rapid than under the expectant system. To determine the true value of the principle herein enunciated would require the observation of a long series of cases, with weighing at different stages, and comparing those to whom bovine is given with those who do not have this food, though in every other respect the treatment is identical. All I can say at present is that my cases fed upon bovine seem to be less emaciated than would otherwise have been the case. As a stimulant, I have only to say that no other form of alcoholic preparation has been used or needed by me in my last twenty cases of typhoid fever.

### TRANSLATIONS.

#### SALICYLIC ACID IN DIPHTHERIA.

D'ESPIN finds that salicylic acid, in solutions of 1-2000, is an excellent parasiticide for the diphtheritic bacillus; while its harmlessness in respect to the animal tissues allows it to be freely and frequently used. It is also a useful prophylactic.

—*Revue Méd. de la Suisse Romande.*

#### FOR PULMONARY PHTHISIS.

R Acidi tannici.....3 j  
Creasoti.....3 ss  
Glycerini,  
Alcohol.....ss q. s

M. et div. in pil. no. viij.

S.—One every two hours.

—*Demarco.*

#### HYPNOTIC POTION.

R Amylen. hydrat.,  
Sp. menthe.....ss 3 j  
Aq. destillat.....f 3 iv  
Syr. aurantii cort. ....f 3 j

M. S.—Take at bed-time.

For women, lessen the dose by one-fourth.  
—*Audhoui.*

#### ANTIPYRINE HYPODERMICALLY.

R Antipyrin .....gr. xv  
Aque dest.....℥. xv  
Cocain. mur.....gr. ½

M. S.—For one injection.

*Gaz. Méd. de Nantes.*

### HOSPITAL NOTES.

#### MEDICO-CHIRURGICAL HOSPITAL.

##### DANGER OF FOREIGN BODIES IN THE ŒSOPHAGUS.

PANCOAST says: "Foreign bodies lodged in the throat should always be removed as soon as possible, as they are very dangerous. A small pointed piece of bone may ulcerate through the œsophagus, and cause dangerous if not fatal hemorrhage by puncturing the aorta."

##### SURGICAL ENGINE IN BONE CARIES.

PANCOAST is a strong advocate for the use of the surgical engine in caries of the long bones. In the case of a boy at his clinic in whom there was extensive disease of the femur of strumous origin, Pancoast practically demonstrated the value of the surgical engine in removing the dead bone. He pointed out the necessity of seeing that the instrument was in perfect working order, as the burrs occasionally become detached and remain in the wound, thus setting up much mischief should they not become encysted.

##### NERVOUS COUGH.

WAUGH gave the following in a case of nervous cough with hyperæsthesia of the larynx:

R Potassii bromid.....gr. x  
Potassii cyanid.....gr. ½  
Syrupi ipecac.....℥. xv  
Syrupi glycyrrhizæ.....ad 3 j

M. et sig.—To be taken every three hours. Mild counter-irritation to be employed over the larynx, the patient to wear flannel and avoid colds.

##### TREATMENT OF DIABETES.

WAUGH says: "The treatment of diabetes is unsatisfactory. An alkali will



relieve the symptoms in many instances; but its administration must not be continued for long, as it causes disintegration of the red corpuscles and weakens the patient. Opium, morphia, and codeia have been tried with some effect. Treatment by diet has probably given the best results; all sugar, starch, and sugar-forming elements being excluded, saccharin being given to replace the sugar. In carrying out this line of treatment the greatest difficulty has been to supply a suitable bread. Pavy, who has made a life-long study of diabetes, suggested that bread made from almonds or gluten be employed; but these are objected to on account of their cost. Recently a vegetable drug called jambol has been introduced by Parke, Davis & Co., as a remedy for diabetes. I intend to give it a trial in a case I have under observation in my medical wards."

#### PENNSYLVANIA HOSPITAL.

##### FRACTURE OF THE PELVIS WITH RUPTURE OF THE URETHRA.

MORTON exhibited what he described as one of the most successful and interesting cases he had ever treated. The patient was a man aged 30 years. On the 7th of November last he was caught between the buffers of two freight cars, and on his admittance to hospital it was found he had sustained a fracture of the pelvis. As it was impossible to pass a catheter, Morton concluded the urethra had sustained serious injury, which proved to be a fact, as on perineal section the urethra was discovered completely torn across at the junction of the membranous and spongy portions. In the treatment of the case the first object was to pass a catheter through the divided urethra into the bladder; but this was impossible, the orifice of the membranous portion having disappeared. It was then decided to perform a suprapubic cystotomy, and in this way pass the instrument from the bladder outwards. This proved entirely successful. During the progress of the case, owing to the broken pelvis bones pressing on the urethra, some sloughing took place, resulting in a rectal fistula, which was cured under treatment, the patient recovering with a perfect urethra. In discussing the diagnosis of

fracture of the pelvis, Morton pointed out that owing to the absence of crepitus, it was impossible in many cases to make out the nature of the injury. When this was so, he advised the introduction of the finger into the rectum, as by this means an accurate diagnosis as to the extent of the fracture could be made, the irregular outlines of the broken bones being readily felt through the rectal wall.

#### RELAPSING TYPHOID.

HUTCHINSON exhibited two cases of relapse from typhoid fever for the purpose of showing the well marked symptoms of the primary disease intensified; and though this is the rule, the mortality is not thereby increased. One had, as a complication, hypostatic congestion of the right lung, and he took occasion to dwell upon the necessity of being alive to this complication, which in many instances was brought on by the patient lying too long in one position. Bed sores, he claimed, were caused very often by a single fold of the sheet.

#### TRACHEOTOMY.

Dr. Morton exhibited a man, 65 years of age, with laryngeal tumor, upon whom two days before, he had performed tracheotomy. The patient, having suffered with intense dyspnoea, expressed great relief since the operation. The important point to be remembered in operations like this is to be supplied with a full set of tubes having curves suitable to different ages; those having perforations are preferred, as by occluding the external opening it is possible to whisper, which was demonstrated by the present case. The tube should be introduced below the cricoid cartilage, dividing the rings rather than excising a portion, and in all cases insert the tube before an attempt be made to stop hemorrhage.

#### UNIVERSITY HOSPITAL.

##### REFLEX VOMITING FROM OVARIAN DISEASE.

PEPPER at a recent clinic presented a patient, aged 33 years, with the following history: She had been twice married, and during the life of her first husband had two miscarriages, each occurring about the third month. There

was no evidence that the miscarriages were due to specific infection. She never became pregnant by her second husband. After the second miscarriage she began to have "bearing down" pains in her abdomen, with some pain and tenderness in left iliac region; her menses however were regular until two months previous to admission, when they stopped. In April last she had a severe attack of vomiting, accompanied by a return of the pain and tenderness in the left ovary. This lasted three weeks, and yielded to treatment. A similar attack, commencing eight weeks ago, during which nothing would stay on her stomach, resulted in her admission to hospital. Pepper mentioned that owing to the presence of blood in the vomited matter, the case might be mistaken for malignant disease of the stomach, or gastric ulcer. Owing to the age of the patient and the absence of cachexia or pain, the former was excluded; while for the same reasons, and the absence of tenderness on deep pressure on the epigastrium, the latter disease was not considered. On close questioning it was found that the blood only occurred in streaks, and was thought to be due to the violent straining during emesis.

Examination *per vaginam* showed that the uterus was prolapsed, the os rigid and the left Fallopian tube swollen. Pepper diagnosed the case as one of sympathetic vomiting, due to reflex irritation from the affected ovary. Pending an operation by Professor Goodell he decided to treat the case as one of gastric disease, and with that object placed the patient on a pill containing one-quarter grain of nitrate of silver with one-half grain of extract of opium. He ordered nothing to be given by the mouth, the nutriment being supplied by enemata.

#### JEFFERSON HOSPITAL.

##### TREATMENT OF LOCOMOTOR ATAXY.

BARTHOLOW at a recent clinic presented a man aged 35 years, in whom all the symptoms of advanced locomotor ataxy were well marked. In discussing the question of treatment, he said: "If the cord is much damaged, the treatment is very disappointing. The only drug I have found of service

is the chloride of gold and sodium, which has some power in restraining the multiplication of connective tissue. It may be given in doses of  $\frac{1}{16}$  grain three times a day, and should the disease be of syphilitic origin, may be advantageously combined with minute doses of the bichloride of mercury. Hot baths, Turkish baths and massage are extremely harmful, and in this connection I may state that the amount of harm produced nowadays by the indiscriminate use of massage is equalled only by that other modern craze—drinking hot water."

##### NITRO-GLYCERINE IN CHRONIC BRIGHT'S DISEASE.

BARTHOLOW, in a recent case of chronic Bright's disease occurring in a little girl, aged six years, where there was high arterial tension, said digitalis was contra-indicated. He strongly advocated the use of minim doses of a centesimal solution of nitro-glycerine, the dose being gradually increased until the physiological effects were produced, and said: "I have seen it produce such good results in so many cases that I have no hesitation in stating that it is to be depended on for its curative effects."

#### MEDICO-CHIRURGICAL COLLEGE.

##### COD-LIVER OILS.

WAUGH prefers the plain brown oils either to the emulsions or to the highly purified oils, as he says the first give much better results in his hands.

##### TONIC FOR CHILDREN.

ATKINSON considers the citrate of iron and quinine a most valuable tonic, especially for children.

##### DYSPEPSIA.

R. Acidi hydrochlorici,  
Pepsini,  
Tincturæ nucis vomicæ,  
Syrupi zingiberis.

M.

Choose the quantities of the various ingredients to suit the particular case. This is a valuable general remedy in dyspepsia. —Waugh.

##### THREATENED ABORTION.

The old treatment of acetate of lead and opium I consider as still the best for threatened abortion. —Stewart.

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WILLIAM F. WAUGH, A.M., M.D., EDITOR.

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**EDITORIAL.**

**PRIVATE ASYLUMS FOR THE  
INSANE.**

**A** CORRESPONDENT, who has, perchance, been perusing Reade's very vivid but hardly realistic romance, "Hard Cash," asks us if the private insane asylum is still in existence.

The thought of a sane man or woman being confined among lunatics is so terrible, that one wonders if a people so tenacious of personal liberty as the Americans would allow an institution to exist which offered the possibility of such a crime. And yet, what safeguards have we for its prevention? Can we truthfully affirm that our laws and the regulations which govern these institutions render the incarceration of sane persons within their walls impossible? We fear the answer must be, that while such a thing is improbable, it is not impossible.

Private asylums are under the supervision of the Board of Public Charities—a body of worthy and capable men. They have the right to inspect these asylums, and investigate any charges of alleged improper restraint.

But who that has visited an asylum has not been addressed by numbers of the inmates with just such statements! Some are obviously insane, even to the

perception of non-professional visitors. Others reveal their insanity if allowed to have their say out. In other cases it requires the study of weeks or of months, with careful sifting of the previous history, to determine the question of their sanity.

We recollect one case in which a man had spent over a year in an asylum and the officers were still unwilling to pronounce him insane.

If the visitors investigate every case which appeals to them, their task is an exceedingly onerous one, and they will have no time left for other duties. If they do not go to this trouble, but take the word of the physician in charge, that "there is nothing in it," they leave the possibility of a terrible wrong to remain in existence.

We do not wish to be understood as believing that sane persons are actually confined in mad-houses to-day. Our contention is that such a thing should be an *impossibility*; and it is not.

It may be said that patients can appeal to their friends or their legal advisers. But in many cases of insanity this would seriously interfere with the treatment, and impair the chances of recovery. Sometimes a case which is progressing favorably will receive a fatal set-back from the visits of friends, who may by unwisely prying into the patient's mental state, tearing open the wound to see if it is healing, frustrate the labors of months. Consequently, the visits of friends, which would afford some chance for escape to a sane man, are likely to do great harm to those who are really insane.

With the public asylum, these objections do not obtain. The officers are supported by the state; they are not pecuniarily benefitted by the retention of wealthy patients, and they take pride in sending out as many recoveries as possible. They have no temptation

to receive improper cases, and it is their interest to send their patients home as soon as they have recovered.

The proprietor of the private asylum has his business interests; he has bills to pay, and the recovery of a good paying patient is money out of his pocket. Suppose he is in financial straits, and a wealthy patient is sent to him whose bills for board may be enough to avert a failure, but whose insanity consists in simple eccentricity, and in his being in somebody else's way. Is it right that men should be placed in such an attitude towards the patients confided to their care? Men are not *all* actuated by the purest motives. It has been suspected that the operation for restoring a lacerated cervix is occasionally done for the sake of the fee rather than because it is really needed. Men who deal with the insane may persuade themselves that a person is "once insane, always insane," and thus justify themselves for looking on their institutions rather as places of restraint than hospitals for cure.

The remedy for this is obvious. Shut up the private hospitals. They are not needed. The public asylums are fully equipped with every necessity for the treatment of the insane, and the private asylums add nothing except the additional space. They are unnecessary; they are founded on wrong principles; they are dangerous; they are relics of the dark ages, and they ought to be abolished.

#### MANAGEMENT OF POST-PARTAL HEMORRHAGE.

**N**O one who has not had to shoulder the responsibility of a death occurring from fatal post-partal hemorrhage, or who has not been present at the time of such an accident, can appreciate the awful suddenness and the need of prompt, energetic action under these circumstances. As is well known, it is one of

the most frequent complications of delivery, especially where the accouchement has been conducted with the patient under the influence of an anæsthetic; the administration of ether, in the author's experience, usually predisposing to this accident. Fortunately it is, to a great extent, a preventable accident; and of this every novice in the practice of obstetric medicine should be firmly convinced. In the majority of cases it is induced by the too precipitous extraction of the placenta, which is torn away instead of being gradually detached from its uterine attachment by the contraction of the uterus. If the uterine contractions be regular and continuous the vessels must of course be sealed up and the hemorrhage effectually prevented. Uterine inertia after labor, then, may be regarded as one great primary cause of post-partal hemorrhage; but there are certain secondary causes which tend to produce it, and of these, one of the most frequent is the fatigue following a protracted and retarded delivery. The uterus is tired out by its expulsive efforts, and when the child is born it remains in a relaxed state. Over-distension of the uterus, from hydramnion or from multiple pregnancy, acts in the same way.

The rapid evacuation of the uterus, rendered imperative by the necessity of haste to deliver in cases of eclampsia or of placenta previa, often gives rise to frightful hemorrhages; owing to the fact that there is not sufficient time for the complete separation of the placenta. Another important cause of post-partal hemorrhage is a partial and irregular contraction of the uterus, part of the uterine muscle being firmly contracted while other portions are relaxed; and the latter is very often over the placental site. Placental adhesions may also conduce to this condition. The constitutional fault or the predisposition to flooding also plays an important part in the bringing about of this condition; indeed, the only fatal case that the author has ever seen was due to this cause. The loss of blood may commence immediately after the birth of the child and before the expulsion of the placenta, or may come on after the delivery of the placenta. The amount of blood lost will vary



from the slight continuous hemorrhage to a sudden and awful *flooding*.

As regards the treatment of post-partal hemorrhage, if the practitioner make a habit of never removing his hand from contact with the uterus (through the abdominal wall) until after the child and the placenta are expelled, he will have the best means of avoiding this accident. As regards the use of ergot, it is best never to give it until after the contents of the uterus are expelled—to wait until after the placenta is delivered.

Of late, a revolution has taken place as to the best means to control post-partal hemorrhage. It is generally agreed that it is necessary, first, to secure the complete emptying of the uterus; and, secondly, to insure prompt uterine contraction, or what may be called primary involution of the uterus. The best means to secure these two conditions are to not exert much tractive force in the delivery of the placenta, and to secure prompt contraction of the uterus as soon as the placenta is expelled. Manual delivery of the placenta is at all times to be avoided, unless the uterus fails to accomplish this object. By adopting the method of Credé—by pressing upon the uterus as the placenta is expelled—we can usually avoid this accident. As soon as the uterus is delivered of its contents it is best to give the patient, immediately, a drachm dose of fluid extract of ergot, repeating the same in the course of ten or fifteen minutes if firm uterine contractions do not ensue. Where the amount of blood lost is large and the hemorrhage vigorous, it is best controlled by the intra-uterine injection of hot solutions of corrosive sublimate (1-2000); which at once induces firm, tonic uterine contractions, washes out any clots that may be in the cavity of uterus, and at the same time places the uterine canal in an aseptic condition. The temperature of the injected fluids should be 110° F. Where intra-uterine irrigation for the control of post-partal hemorrhage is practised, it is well to secure the further and constant aseptic condition of the uterine cavity by the introduction of an iodoform baccillus. This method has been pursued by the author in hospital and private practice

with the happiest results, and has yielded much better results than the older methods of the introduction of astringent solutions. Until the douche or irrigator can be gotten ready, hemorrhage from the uterus after delivery is usually easily controlled by manual compression—the lips of the uteres being grasped and the fingers of the one hand carried into the vagina, while firm compression of the fundus is made with the other hand through the abdominal parietes. In order to prevent recurrence of the hemorrhage, the child should be promptly put to the breast and kept almost constantly there; a drachm dose of fluid extract of ergot should be administered every two or three hours. Every practitioner of medicine should be, I take it, compelled by law to provide himself with the necessary apparatus for irrigating the uterus, and with a supply of fluid extract of ergot, which he should take with him to every case of labor that he is called upon to attend. These precautions followed out, we doubt if any fatal case of post-partal hemorrhage would occur.

C. M. W.

## ANNOTATIONS.

### AN UNJUST JUDGE.

We are sorry to be compelled to call attention to this matter, but the Virginia Examining Board has, by its very peculiar method of registering applicants for examination, been instrumental in spreading an untrue report concerning the Medico-Chirurgical College of Philadelphia; and, although its attention has been repeatedly called to the matter, the Board has not rectified it.

In the report of this Board it is stated that there were three candidates from the college in question—all of whom failed, and two of them failed at their second trial. On inquiry it turns out that there has been but one candidate before the Board, who has made three attempts and failed each time.

Starting with the supposition that this Board has no special reason to be inimical to the college in question, we would like to know why the registry is made in such a manner as to give the

impression that three candidates were rejected. Many journals have commented on this case, and everyone has understood that there were three candidates. The Board should make its reports in such a manner as to be intelligible.

Supposing the Board to be impartial, why has it not registered the candidates from all colleges in the same manner? If one man examined three times is registered as three first failures and two second failures, how does it happen that in other cases we see records of *one* first failure and one second failure credited to the same college? If the registry were made as it was with the Medico-Chirurgical College, it should read two first failures and one second failure.

Having thus published a record which, as everyone reads it, is literally untrue, without a word of explanation to prevent the injustice which such a report was bound to do the college; having registered this college's candidate in a way to make the worst possible showing for it, and used a different method for other colleges, the Board was in honor bound to correct the slander it had put into circulation. This, however, it has not done. We know of no reason which should make the Virginia Board hostile to this college; but this method of operating looks more like the trickery of an unscrupulous enemy than the work of an honest and impartial judge. The only explanation we can give is that the Board has been manipulated by parties who are hostile to this college. Such things are not calculated to greatly elevate the standard of medical education.

#### THE LICENSER'S BILL.

At the time of writing, the prospects for the passage of the bill for the creation of a State Board of Examiners and Licensers for this State appear to be good. The committee has been in correspondence with nearly 500 of the most prominent physicians of the State, and but three have written letters in opposition to it; two of them being those published in previous numbers of this journal. All over the State there has been developed an earnest desire to elevate the standard of the profession

and secure official recognition to those who are worthy of it.

While some have objected to various features in the bill, all have agreed that its passage will be a great step in advance, and have wisely consented to waive minor objections in order to secure the greater good.

The bill has been somewhat modified in accordance with the advice of legal authorities, and is now as complete as it is possible to make it. The burning question has been that of the exclusive schools. Some of the homœopathsists objected to the bill under the impression that they were excluded from representation; while the fact that class legislation must be avoided precludes the introduction of their specific designation. The only way to remedy this difficulty was to enlarge the privilege of the appointing power. By the terms of the bill as it now stands, the governor is empowered to select the board from lists of eighteen names, of physicians now registered, presented by each of the Pennsylvania State Medical Societies. The Governor can at his pleasure appoint all or any part from either society. Some apprehensions were expressed that the Governor would exclude the regular profession or the homœopathsists, and thus place the party excluded at a disadvantage; but the chances that Governor Beaver, or any person the citizens of Pennsylvania may deem worthy to succeed him, would do anything so unjust and impolitic are too trifling to be taken into consideration. No bill could possibly be framed which would provide for every remote contingency by which some person might be wronged, and yet accomplish the object.

#### DR. HAMILTON'S RESIGNATION.

DR. HAMILTON has resigned the editorship of the Journal of the American Medical Association; Congress having passed a bill which gives a secure life tenure to the Surgeon-General of the Marine Hospital service, and raised the salary to \$5000. Those who are in a position to appreciate the work which Dr. Hamilton has done as Surgeon-General, will be well satisfied to know that this responsible office will still be filled by him. Meanwhile the A. M. A.

must find a man who can do for their journal what Ernest Hart has done for its British compeer. The union of professional knowledge, discrimination and business ability, in a man who is willing to accept the position, with its moderate salary and uncertain tenure, is not easily to be found.

#### QUININE FOR TETANUS.

DESPERATE cases demand desperate remedies. The average man is apt to believe that as a tack hammer is not good to drive spikes, so when we have to face such a grisly pathological giant as tetanus, the remedy should bear some proportion to the size of the disease. And sometimes the average man is correct in both premises and conclusion. Some years ago we received a letter in which the writer, a Southern physician of much experience, stated that many years before the war his father had a case of tetanus, to which by mistake an ounce of quinine was given at one dose. The patient recovered. Subsequently, both father and son treated tetanus with quinine in doses of 100 grains, with great success.

In the *Southern Practitioner*, Dr. Pugh of Texas reports a case of tetanus in which he gave 100 grains of quinine with six drops of Norwood's tincture of veratrum viride. In twenty-five minutes the patient was sleeping, and rested well for three hours. The dose was repeated in eight hours, and every eight hours subsequently, reducing by twenty grains. The convulsions ceased in twenty-four hours, and in six days the patient was well enough to call at the doctor's office.

Some irritation has been caused by the neglect of our subscribers to read our announcements. The *TIMES* does not receive subscriptions except in advance. When a subscription has expired, it is the subscriber's business to notify the publishers if he wishes it stopped; and if he fails to send such notice the law makes the subscriber pay for the journals which are sent him. Last year we adopted the plan of stopping the journal as soon as the subscription had expired; but the complaints were loud and deep, and we

often found ourselves unable to supply the back numbers. This year, to please these persons, we continued to send the journal, and also sent a bill for the advance subscription. In a few cases, the recipient appears to have supposed we wished to collect a second time for the last year, and we have received several letters to that effect.

Hereafter the *TIMES* will stop at once when the subscription expires, and we will not undertake to supply back numbers. The date at which each subscription expires is plainly printed on each address, and if any reader takes so little interest in the journal that he will not note when his subscription expires in time to renew promptly, the *TIMES* will try to get along without him.

#### FEMALE PHYSICIANS.

The theory has been advanced that women who are masculine in their tastes, who prefer men's ways and occupations, for which women are especially unfit, such as that of physicians, are probably in reality of imperfect development; that their genital organs will be found to exhibit a tendency to hermaphroditism.

This is probably the most fatal blow yet struck by the opponents of female physicians; and it is absolutely fiendish to spring such an idea, now, when so many ladies have already committed themselves by taking up the study.

#### PARIS LETTER.

##### SÉE ON STROPHANTHINE.

PROFESSOR GERMAIN SÉE reports to the Academy of Medicine his ideas about strophanthine in particular and the alkaloids in general. Considerable difference of opinion has always existed in regard to whether it is well to give strophanthus or strophanthine; many claiming that a tincture of this plant acts better than the alkaloid, and an infusion of digitalis better than digitaline. Dr. Sée, however, puts his foot down in his usual energetic style, and says that to fulfil all therapeutic indications we should give the essential principles, that is, the alkaloids and glucosides, which he says have an incontestible superiority over the plants in any form; quinine

over cinchona; morphine over opium; atropine over belladonna; and digitaline over digitalis.

According to the professor, we should do honor to modern medicine and chemical biology, by always prescribing the alkaloids.

It is only just, however, to state that Drs. Dujardin Beaumétz and Henri Huchard agree to differ with Dr. Sée in so far as concerns digitalis, which they, in common with the larger number of physicians in Europe, at least, prescribe in infusion. And we are certain that some physicians prefer cinchona to quinine in certain cases.

The question is open. What do you in America say?

#### HEART DISEASES.

Dr. Sée then proceeded to define heart diseases, and he insists first of all that there are a large number of heart cases that go on for years, some as much as twenty-five years, without any need of aid from drugs. The most frequent are cases of aortic insufficiency in young males; and in the second class are those of mitral stenosis that he has seen in young chlorotic females, but which leaves them in fair health. When, however, mitral stenosis is seen in men, later in life, it is most fatal and dangerous; but not so much so as mitral insufficiency, which is always fatal, and goes on from bad to worse, no matter what is done. This notwithstanding English doctors who have published pretended cases of cure, which is not possible, as it is never cured. The danger in heart troubles increases when the hypertrophy is caused by sclerosis of the arteries of the heart itself; above all, of the coronary arteries.

In regard to therapeutics in heart cases, Dr. Sée says that in presence of these differences it is not at all astonishing that strophanthus and other drugs appear to produce an amelioration; but if the heart has weakened or deviated from its comparative force, we should always give sparteine or strophanthine. If there is oppression, which is the first sign of a loss of circulatory equilibrium, then give iodide of potassium.

When there is dyspnoea, always give the iodides; when there is hydropsia, use caffeine and digitaline.

The diuresis obtained from strophanthus is but slight, not over 2000 grammes; so use in preference the real heart diuretics, such as milk, the benzoate of soda, digitaline and calomel, which are sure.

When the respiration is at fault, use iodides, and give an injection (hypodermic) of antipyrine. As to the neuroses of the heart, it is again antipyrine, sparteine and convallamarine you must look to.

#### NEW SIGN OF ENDOCARDITIS.

While upon heart diseases we may speak of a new study by Dr. Duclos, (who is a clinical professor of medicine in the medical school at Tours). He calls attention to a clinical fact which seems to have a certain importance as a premonitory sign of endocarditis in acute rheumatism. Bouillaud long ago formulated the laws of coincidence of endocarditis and rheumatism, and since that time careful physicians always make a daily minute auscultation of the heart in all such cases, going over all the points to examine each orifice, and trying to catch the first sound of the *bruit de souffle*.

Duclos in doing this found out some years ago that there was an absence of synchronism between the ventricular contraction and the radial pulsation. In the normal state the pulsation of the artery at the wrist occurs *almost* at the same time as the heart's contraction; with an eighth-second watch there is not a quarter of a second's difference, but in these cases there will be a much longer period; according to M. Duclos, nearly two-thirds of a second's delay; while there is not, as yet, the slightest sound of the cardiac bruit. The next day, invariably, a systolic souffle is heard, showing the existence of endocarditis.

This was proved in a large number of cases for years before M. Duclos brought it to the attention of observers; and he now draws up the following conclusions: 1st. That it is important in all cases of poly-articular rheumatism to make a complete auscultation of the heart daily, and *keep the finger at the same time on the radial pulse*. 2d. In such cases at a certain period there will often be found an asynchronism be-



tween the cardiac and the radial pulsation; which is a premonitory sign of endocarditis, and this will be found some twenty-five to thirty hours before the *bruit de souffle* can be detected.

The practical outcome is to institute an energetic treatment as soon as this sign is found; and M. Duclos claims to have done much good by so doing. He advises at once to put a large flying blister over the cardiac region, for several hours only, removing it as soon as the skin burns with the cantharides; or, to use some other form of counter-irritation, such as mustard, or dry cups, while the internal medication, be it salicylates or quinine, should be largely increased. Experience has shown that this treatment has given excellent results in such cases.

#### HUCHARD ON NEW DRUGS.

Huchard, speaking of new drugs, says that, for some time back, he has looked upon the latest inventions with distrust. We have the old ones, which have been proved and tried for years; and still we are not yet fixed on their real physiological action or their therapeutical indications. For instance: all authors proclaim digitalis to be the best of cardiac medicines; and yet every day a new drug is brought out with this particularity: that it is to replace digitalis. All the same, the careful doctor still gives the old drug.

There are four important diseases for which therapeutics and therapeutists still hesitate: they are typhoid fever, pulmonary phthisis, diphtheria, and heart disease. For the last, all are just now greatly in favor of strophanthus; which, while M. Huchard thinks it may be an excellent remedy, is still untried and not fixed in its indications. In the meantime, digitaline, declares M. Huchard, is in no way endowed with properties similar to the mother-plant, digitalis.

#### ANTIPIRYNE FOR URINARY CALCULI.

Huchard gives some cases to prove a new action in antipyrine, which certainly seems to increase in favor constantly. It now seems that it has a curative action in dissolving calculi in the urinary passages. Two cases are given of men who suffered with violent

nephritic pains. One of them found the relief from pain so complete that he continued to take one gramme of antipyrine per day for six months; and Huchard was astonished to find that not only had the pain gone, but there was no longer any gravel in the urine; whereas before he excreted large quantities. Chemical examination of the urine, which had become clear and limpid, showed that there was only a normal quantity of uric acid.

The second case was one of Loeig's, of Carlsruhe: a man of 70, who had suffered for years with pain in the lumbar region, with a renal lithiasis. On taking only 0.10 centigrammes of antipyrine per day, the pain left him and the excretion of the urates stopped.

It has been stated by Renant, of Lyons, and others, however, that antipyrine *shuts up the kidney*; and many give the diuretic waters (Vittel, Contrexeville, etc.) with antipyrine.

Huchard gives antipyrine as follows, to prevent any digestive troubles:

R. Antipyrine.....15 grammes  
Bicarbonate of soda. 5 grammes

M. Ft. 30 cachets. Sig.—Take one or two in the middle of meals.

#### ANTIPIRYNE DURING MENSTRUATION.

M. Huchard also gives a *contra-indication* for antipyrine: Never gives it during the first two or three days of the catamenial flux. It has been proved by Henoque that antipyrine has a strong hemostatic action, and when it has been given during the menstrual period, it has not only arrested the courses, but also caused fainting, with trembling of the limbs and cyanosis of the face; while in one case there were repeated attacks of syncope.

#### PHENACETINE.

Phenacetine, M. Huchard concludes, is much inferior to antipyrine. Ringer, while admitting "that his experience with it was limited, still is sorry to say that it is not favorable."

#### SULPHONAL.

Before closing with M. Huchard's ideas, we may say that he finds sulphonal of use as a hypnotic, but not as an analgesic. He tried it on a number of patients, and ten times out of fifteen

it was useful. It gives rather prolonged sleep, sometimes dreams and nightmare, and on waking a feeling of weakness and giddiness. It does not seem better than chloral, but it can be given in *cachets* of ten grammes for producing sleep, or in doses of two or three grammes to nervous patients as a sedative. Give with it beef-tea, soup or milk, to assist its effects. Dr. Moutard-Martin, physician to the Hotel Dieu, took it himself to procure sleep, and found that it acted slowly but well, except on waking he felt *malaise* for several hours; privately, he said, he felt as if he had been on a bust.

## URÆMIA.

DR. DUJARDIN-BEAUMETZ in a late article indicates the best method in kidney cases to prevent the formation and accumulation of toxic substances. This is the greatest question of the day, how to get rid of the *ptomaines* which we eat with our food or which come from an imperfect digestion. We have also to combat the leucomains of the organism.

In a general way, the regimen should be vegetable, with eggs and milk. Eggs should be *well cooked*, so that the albumen will not pass completely through the kidneys; starch foods must be smashed, or mashed into *purée*; because potatoes, etc., must be well boiled; fruits must be cooked, except strawberries and grapes. White wine mixed with Pougne's whiskey may be used, but no spirituous liquors. All meat and fish foods, oysters, etc., etc., must be given up. It is the latter that produce the *ptomaines*.

Antiferments must be given to regulate the stomach. Dujardin-Beauméts gives the two following formulas, which are to be taken, one cachet at noon and one at 6 o'clock dinner, of either one of the prescriptions:

Salicylate of bismuth....	} 33 10 grms.
English magnesia.....	
Bicarbonate of soda.....	

Or:—

Salicylate of bismuth....	} 33 10 grms.
Naphthol.....	
Magnesia.....	

THOMAS LINN, M.D.

Paris, Jan. 25, 1889.

## SOCIETY NOTES.

## ROYAL MEDICAL AND CHIRURGICAL SOCIETY, LONDON.

(Reported by Dr. John N. Donnellan, London).

At a meeting of this Society held on Jan. 22, Sir Edward Sieveking, President, in the chair, a paper, of which the following is an abstract, was read by the Secretary for Professor Humphry:

I.—*Back-knee, Knock-knee, Bow-knee, and other Deformities resulting from Deficiency of Growth at the Epiphyseal Lines.* By PROF. HUMPHRY, F.R.S., Professor of Surgery, Cambridge University.

A case and specimen of what the author calls "back-knee" were exhibited, in which the deformity is seen to result from a sharp bend backward near the upper end of the tibia, due, as it appears, to a deficiency in growth at the fore part of epiphyseal line. "Knock-knee," he stated, depends in most cases not, as commonly said, upon overgrowth of the internal condyle of the femur—overgrowth in a bone or part of a bone being a rare occurrence—but upon deficiency of growth of the outer or condyloid part of the femur at the epiphyseal line; and a specimen illustrative of this was shown. The deformity is in some cases exaggerated by rickety flexure in the femur or tibia, or both, and may be entirely due to such flexure. "Bow-knee" may be also due to similar flexures in an opposite direction; but is often dependent, partly or wholly, upon deficient growth at the inner part of the epiphyseal line of the tibia or of the femur. Specimens of deformity at the upper end of the humerus, attributable to the like cause, were shown, and the deformity in "lateral curvature of the spine" was also referred, in part at least, to the interference of growth at the upper and lower epiphyseal lines of the bodies of the vertebræ. These several deformities the author regarded as being of a rickety nature; the growth, including ossification as a part of that growth, which takes place almost entirely on the shaft side of the epiphyseal lines, being, as is well known, commonly defective in rickets, and productive of that familiar bulging of these lines con-

sequent on their inability to resist the pressure to which they are subject. The epiphyseal lines of the femur and tibia near the knee, especially that of the femur, being those in which growth takes place to a greater extent than in any other part of the body, are the most likely to manifest imperfection; and forasmuch as growth in them is continued to a later period than in other parts of the skeleton, the imperfection often manifests itself here at a later period than in other parts, sometimes not till the other evidences of rickets have passed away, and not unfrequently in persons in whom no other signs of rickets have been observed.

In the discussion which followed Mr. Adams remarked that one of the most characteristic of the group of rickety deformities was the defective ossification of the epiphyses, resulting in a deficiency in the length of the bone—a long body and short legs were typical of rickety subjects. Mr. Edmund Owen, referring to the question whether those deformities were due to a defective condition of the bones or the ligaments, said the weaker structure would yield first—the bones yielding in the direction of their natural curves.

II. *On a Peculiar Obstructive Form of Laryngeal Tuberculosis which Simulated Bilateral Abductor Paralysis.*  
By PERCY KIDD, M.D., F.R.C.P.  
(Physician to the Brompton Hospital.)

This paper was based upon six cases in which symptoms of laryngeal obstruction were found to be due to persistent fixation of the vocal cords in the position of phonation, simulating bilateral paralysis of the crico-arytenoidi postici muscles.

In all these cases the patients were the subject of phthisis, and tubercular lesions were present in the larynx; but in no instance was there sufficient swelling of the soft parts to occasion stenoses, which was amply accounted for by the condition of the "rima glottidis."

In three cases a necropsy was obtained.

The pathogenesis of this affection was discussed, and reference was made to the work of others. The conclusion

was drawn that stenosis of the glottis from fixation of the vocal cords in the median situation, simulating bilateral abductor palsy, may occur in tubercular disease of the larynx as the result of at least three causes:

1. Dense tubercular infiltration around the arytenoid cartilages, secondarily involving the perichondrium and leading to false ankylosis of the crico-arytenoid joints.

2. Ulceration and morbid adhesion of the altered vocal cords.

3. Suppurative crico-arytenoid arthritis.

The clinical points raised by the narration of the cases were then considered, and attention was drawn to the question of tracheotomy, the conclusion arrived at being that tracheotomy or some other surgical measure is indispensable when this condition of the glottis is detected.

#### DISCUSSION.

DR. DE HAVILAND HALL said that the condition was one which had not hitherto received the recognition it deserved. He hoped that in future more attention would be directed to the subject. He mentioned the case of a lady respecting the condition of whose larynx he had been consulted a few days previously, when he found very much the condition described by Dr. Kidd; the only difference being that the cords instead of being fixed in the position of phonation were nearer the cadaveric position. Under ordinary circumstances the more powerful abductors were likely to overcome the adductors, but in exceptional cases the cord did become fixed in the cadaveric position. He thought that in some cases thyrotomy was worthy of consideration, but no one who had witnessed the physical misery of patients with laryngeal phthisis after tracheotomy would care to recommend that course unless in *extremis*. If, by splitting the thyroid, the parts causing the obstruction could be removed without setting up perichondritis, they would be justified in recommending the operation as likely to save the patient much suffering.

DR. DOUGLAS POWELL said that as far as his experience went he agreed with Dr. Kidd as to the fixation of the cords

being due to tubercular infiltration. His own case did not die, and was alive now for aught he knew to the contrary, as it was at a comparatively early stage. He was under the impression that there was some crico-arytenoid arthritis, but of course that could not be affirmed. He commended the caution recommended by Dr. Kidd in advising surgical interference. In the cases operated on at the Brompton hospital the patients were actually menaced with asphyxia. The invariable presence of concomitant disease of the lungs rendered any operation undesirable.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE FOR THE FIVE WEEKS ENDED JANUARY 26, 1889.

Carter, H. R., Passed Assistant Surgeon.—Leave of absence extended six days.

Wheeler, W. A., Passed Assistant Surgeon.—When relieved at Buffalo, N. Y., to proceed to Cleveland, Ohio, and assume charge of the Service, January 3, 1889.

Urquhart, F. M., Passed Assistant Surgeon.—To proceed to Buffalo, N. Y., and assume charge of the Service, January 3, 1889. Placed on waiting orders, January 12, 1889.

Carrington, P. M., Passed Assistant Surgeon.—Granted leave of absence of thirty days, January 25, 1889.

Williams, L. L., Passed Assistant Surgeon.—Granted leave of absence for fifteen days, December 26, 1888.

Petters, W. J., Assistant Surgeon.—Ordered to examination for promotion, January 15, 1889.

Magruder, G. M., Assistant Surgeon.—To proceed to Louisville, Ky., for temporary duty, January 22, 1889.

Kinyoun, J. J., Assistant Surgeon.—To proceed to Baltimore, Md., for temporary duty, December 29, 1888.

Condict, A. W., Assistant Surgeon.—Granted leave of absence for thirty days, January 26, 1889.

CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING FEBRUARY 2, 1889.

P. A. Surgeon H. B. Scott.—Detached from Naval Hospital, Mare Island, Cal., and granted one year's sick leave.

P. A. Surgeon J. H. Hall ordered to Naval Hospital, Washington, D. C.

Surgeon H. C. Eckstein detached from U. S. S. "Adams" and wait orders.

Surgeon W. S. Dixon detached from special duty at Baltimore, Md., and to the U. S. S. "Boston."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 27th, 1889, to FEBRUARY 9th, 1889.

By direction of the Secretary of War, Colonel Jedediah H. Baxter, Chief Medical Surveyor, will proceed to New York City.

By direction of the President, Lieutenant Colonel Joseph C. Baily, Assistant Medical Surveyor, and Major Charles L. Heizmann, Surgeon, are detached as members of the Army Retiring Board at San Antonio, Tex., convened by War Department, order dated January 16.

By direction of the President, Major George M. Sternberg, Surgeon U. S. Army, will proceed to the Island of Cuba for the purpose named in the letter of the President addressed to the Secretary of War, April 17, 1888, and upon completion of this duty will return to his proper station and submit his report to the President.

By direction of the Secretary of War, Major George M. Sternberg, Surgeon, is relieved from duty as attending surgeon and examiner of recruits at Baltimore, Md.

Captain Henry S. Kilbourne, Assistant Surgeon, having complied with Par. 2, S. O. No. 6, Department of the Columbia, will return to his station, Vancouver Barracks, W. T.

By direction of the Secretary of War, Captain Robert W. Shufeldt, Assistant Surgeon, having appeared before the Army Retiring Board at Fort Leavenworth, Kansas, in compliance with paragraph 1, S. O. No. 4, January 5, 1889, from this office, will repair to this city to await action in his case.

By direction of the Secretary of War, the leave of absence granted Captain Louis A. La Garde, Assistant Surgeon, S. O. No. 290, December 13, 1888, from this office, is extended to three months.

Captain Edgar A. Thearus, Assistant Surgeon Fort Snelling, Minn., will proceed without delay to Fort Pensive, Dak., and report to commanding officer of that fort for temporary duty.

Leave of absence for one month, on Surgeon's certificate of disability, is granted Major L. Y. Loring, Surgeon.

By direction of the Secretary of War, the leave of absence on Surgeon's certificate of disability granted Captain Henry G. Burton, Assistant Surgeon, in Special Orders, No. 19, January 24, 1889, from this office, is extended six months on Surgeon's certificate of disability.

Captain Henry S. Kilbourne, Assistant Surgeon U. S. A., will accompany Battery E, 1st Artillery, changing station from Vancouver Barracks to Presidio, San Francisco, Cal., as Medical Officer, and upon completion of this duty will report to the Commanding General, Division of the Pacific, for further orders.

Leave of absence granted Captain Curtis E. Price, Assistant Surgeon, in S. O. No. 25, A. G. O., Nov. 13, 1888, is extended two months.